depleting substances used in refrigeration and requires proper disposal of these substances, such as recycling or recovery.

Flammability and Fractionation Information

Fractionation and flammability tests by the submitter have determined that although one component of this blend is flammable, this refrigerant blend is not flammable.

Toxicity and Exposure Data:

This blend's constituents are all non-toxic.

6. SP34E

EPA's Decision

SP34E is acceptable for use as a substitute for CFC–12 in the following end uses:

Household refrigerators and freezers (retrofit and new)
Refrigerated transport (retrofit and new)
Retail food refrigeration (retrofit and new)
Cold storage warehouses (retrofit and new)
Vending machines (retrofit and new)
Water coolers (retrofit and new)
Reciprocating chillers (retrofit and new)

SP34E is acceptable for use as a substitute for CFC–12, subject to use conditions for motor vehicle air conditioning (retrofit and new).

SP34E is an HFC refrigerant with additives. Solpower, the submitter, has claimed the composition is confidential business information.

Conditions for use in Motor Vehicle Air Conditioning Systems:

Regulations regarding recycling and prohibiting venting issued under section 609 of the Clean Air Act apply to this blend.

On October 16, 1996, (61 FR 54029), EPA promulgated a final rule that prospectively applied certain conditions on the use of any refrigerant used as a substitute for CFC–12 in motor vehicle air conditioning systems (Appendix D subpart G of 40 CFR part 82). That rule provided that EPA would list new refrigerants in future notices of acceptability. Therefore, the use of SP34E as a CFC–12 substitute in motor vehicle air conditioning systems must follow the standard conditions impose on previous refrigerants, including:

The use of unique fittings designed by the refrigerant manufacturer,
The application of a detailed label,
The removal of the original refrigerant prior to charging with SP34E, and
The installation of a high-pressure compressor cutoff switch on systems equipped with pressure relief device.

The October 16, 1996 rule gives full details on these use conditions.

You must use the following fittings to use SP34E in motor vehicle air conditioning systems:

Fitting type	Diameter (inches)	Thread Pitch (threads/inch)	Thread Direction
Low-side service port	.5 (8/16)	18	Left
High-side service port	.4375 (7/16)	14	Right
Large containers (>20 lb.)	.5 (8/16)	18	Left

Currently, there is no fitting for small cans. Thus, small cans may not be used for distribution of this product until either cans are developed that can use the fittings above or EPA issues a future acceptability notice identifying an alternative fitting. The labels will have a tan background and black text.

Required Changes in Technology

When using this refrigerant, you would need to use a filter dryer appropriate for use with R–134a. The submitter claims that SP34E is a replacement for CFC–12 that allows the use of mineral oil instead of synthetic oil. EPA has not evaluated any claims about the effectiveness of SP34E or whether it may be used with mineral oil. You may find materials in Docket A–91–42 concerning these claims.

Environmental Information

SP34E has an ozone depletion potential (ODP) of zero. Some of the constituents of SP34E have GWPs, with the highest GWP over 100 years being 1300. This value is lower than the GWP of the substance that SP34E would be replacing. The longest-lived constituent has an atmospheric lifetime of 14.6 years. The contribution of this blend to global warming will be minimized through requirements under sections 608(c)(2) and 609 of the Clean Air Act. Section 608(c)(2) prohibits venting or release of substitutes for class I and class II ozone depleting substances used in refrigeration and requires proper disposal of these substances, such as recycling or recovery. Section 609 requires refrigerant recycling and training and certification for people repairing or servicing motor vehicle air conditioning systems.

Flammability Information

Some constituents of the blend are flammable. Flammability testing by an independent laboratory has determined that SP34E as blended is not flammable. SP34E has no flash point.

Toxicity and Exposure Data

SP34E exhibits low toxicity. Two of its constituents have manufacturer acceptable exposure limits (AELs) of 1000 ppm over an 8-hour time-weighted average. For the remaining constituent, the Occupational Safety and Health Administration (OSHA) has issued a permissible exposure limit of 1000 ppm over an 8-hour time-weighted average. SP34E was submitted to the Agency as a Premanufacture Notice (PMN) under the Toxic Substances Control Act.

7. Correction: "Furan" Corrected to Perfluoro (oxacyclopentane)

The April 11, 2000 notice of acceptability at 65 FR 19327 incorrectly said that EPA was approving "furan" as a substitute for CFC–114 for use in uranium isotope separation processing (retrofit uses). The proper name of the substitute approved for this purpose is perfluoro (oxacyclopentane). It may also be called octafluorotetrahydrofuran or furan, octafluorotetrahydro. Its formula is c-C_4F_8O. Perfluoro (oxacyclopentane) is a cyclic perfluoroether (PFE), with similar atmospheric properties to those of perfluorocarbons (PFCs): long atmospheric lifetime and high global warming potential. Therefore, the same care as recommended for PFCs should be applied in handling this cyclic PFE in order to minimize emissions.

B. Foams

1. Methyl Formate

EPA Decision

Methyl formate is acceptable as a substitute for CFCs and HCFCs in the following end-uses:

Rigid polyurethane and polyisocyanurate laminated boardstock;
Rigid polyurethane appliance;

Rigid polyurethane slabstock and other foams;
Rigid polyurethane commercial refrigeration and sandwich panels; and
Polyurethane integral skin foam.

Environmental Information

Methyl formate has no ODP and very low or zero global warming potential (GWP). Users should be aware that methyl formate is a volatile organic compound (VOC) and may be subject to state or federal requirements developed under Title I of the Clean Air Act. Also, because methyl formate is considered hazardous, spills and disposal should be handled in accordance with requirements of the Resource Conservation and Recovery Act (RCRA).

Flammability Information

Methyl formate is flammable and should be handled with proper precautions. Use of methyl formate will require safe handling and shipping as prescribed by OSHA and DOT (for example, using personal safety equipment and following requirements for shipping hazardous materials at 49 CFR parts 170 through 173).

Toxicity and Exposure Data

Methyl formate is toxic and should be handled with proper precautions. Use of methyl formate will require safe handling and shipping as prescribed by OSHA and DOT (for example, using personal safety equipment, observing permissible exposure limits, and following requirements for shipping hazardous materials at 49 CFR parts 170 through 173). OSHA established a permissible exposure limit for methyl formate of 100 ppm for a time-weighted average over an eight-hour work shift. The National Institute of Occupational Safety and Health and the American Conference of Governmental Industrial Hygienists recommend a 15-minute short term exposure limit (STEL) of 150 ppm.

C. Non-Aerosol Solvent Cleaning

1. HFE–7100

EPA Decision

Hydrofluoroether 7100 is acceptable as a substitute for HCFC–141b and HCFC–22 in metals cleaning, precision cleaning, and electronics cleaning applications. Hydrofluoroether 7100 is also known as HFE–7100; $C_4F_9OCH_3$; $C_6F_9OH_5$; methoxynonafluorobutane, iso and normal; and methyl nonafluorobutyl ether. EPA previously found HFE–7100 acceptable as a substitute for CFC–113 and methyl chloroform in metals cleaning, precision cleaning, and electronics cleaning applications (61 FR 47015).

Environmental Information

HFE–7100 does not deplete the ozone layer since it does not contain chlorine or bromine. It has a 4.1-year atmospheric lifetime and a global warming potential (GWP) of 390 over a 100-year time horizon. These values are lower than the atmospheric lifetime and GWP of the substances HFE–7100 would be replacing.

Flammability Information

HFE–7100 is non-flammable.

Toxicity and Exposure Data

HFE–7100 exhibits low toxicity, with a workplace environmental exposure limit (WEEL) of 750 ppm established by the American Industrial Hygiene Association (AIHA).

2. HFE–7200

EPA Decision

Hydrofluoroether 7200 is acceptable as a substitute for HCFC–141b and HCFC–22 in metals cleaning, precision cleaning, and electronics cleaning applications. Hydrofluoroether 7200 is also known as HFE–7200; $C_4F_9OC_2H_5$; $C_5F_{10}H_2$; and ethoxynonafluorobutane, iso and normal. EPA previously found HFE–7200 acceptable as a substitute for CFC–113 and methyl chloroform in metals cleaning, precision cleaning, and electronics cleaning applications (64 FR 68039).

Environmental Information

HFE–7200 does not deplete the ozone layer since it does not contain chlorine or bromine. It has a 0.9 year atmospheric lifetime and a GWP of 55 over a 100-year time horizon. These values are much lower than the atmospheric lifetime and GWP of the substances HFE–7200 would be replacing.

Flammability Information

The flammability range in air is 2.4–12.4%. HFE–7200 has no flashpoint.

Toxicity and Exposure Data

The manufacturer's recommended exposure guideline for HFE–7200 is 200 ppm over an eight-hour time-weighted average. EPA expects HFE–7200 users to follow all recommendations specified in the manufacturer's Material Safety Data Sheets (MSDSs). The Agency also expects that users of HFE–7200 will adhere to any acceptable exposure limits set by any voluntary consensus standards organization, including the American Conference of Governmental Industrial Hygienists' (ACGIH) threshold limit values (TLVs) or the AIHA's WEELs.

3. Heptafluorocyclopentane

EPA Decision

Heptafluorocyclopentane is acceptable as a substitute for CFC–113, methyl chloroform, and HCFC–141b in precision cleaning, electronics cleaning and metals cleaning applications within the non-aerosol solvent cleaning sector. Heptafluorocyclopentane is also known as HFCPA and $C_5H_3F_7$, and by the trade name Zeorara-H .

Environmental Information

HFCPA is a hydrofluorocarbon, and thus has no ozone-depleting potential. The GWP is 250 over a 100-year time horizon, and the atmospheric lifetime is 1.8 years. These values are either lower or comparable to the GWPs and atmospheric lifetimes of the substances HFCPA would be replacing.

Flammability Information

HFCPA has no flash point below its boiling point.

Toxicity and Exposure Data

Although this acceptability determination is not subject to any use conditions or narrowed use restrictions, EPA expects users to adhere to the manufacturer's recommended exposure guideline of 123 ppm over an eight-hour time-weighted average, with a ceiling of 500 ppm.

4. HFC–365mfc

EPA Decision

HFC–365mfc is acceptable as a substitute for CFC–113, methyl chloroform, and HCFC–141b in precision cleaning, electronics cleaning, and metals cleaning applications within the non-aerosol solvent cleaning sector. HFC–365mfc is a halogenated alkane.

Environmental Information

HFC–365mfc contains no chlorine or bromine and does not contribute to ozone depletion. The GWP is 790 over a 100-year time horizon and the atmospheric lifetime is 10.2 years. These values are either lower or comparable to the GWPs and atmospheric lifetimes of the substances HFC–365mfc would be replacing.

Flammability Information

HFC–365mfc has no flash point. The lower and upper flammability limits are 3.8% and 13.3%, respectively.

Toxicity and Exposure Data

The submitting manufacturer has set a preliminary acceptable exposure limit (AEL) of 500 ppm.